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EXAMINER

GRAHAM, ANDREW R

ART UNIT

PAPER NUMBER

2697

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12

Please find below and/or attached an Office communication concerning this application or proceeding.

B

# Office Action Summary

Application No.

09/707,616

Applicant(s)

LINDEMANN ET AL.

Examiner

Andrew R Graham

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-47 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-47 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 April 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: .

**DETAILED ACTION**

***Information Disclosure Statement***

1. The information disclosure statement filed February 28, 2001 fails to comply with 37 CFR 1.98(a)(3) because it does not include a concise explanation of the relevance, as it is presently understood by the individual designated in 37 CFR 1.56(c) most knowledgeable about the content of the information, of each patent listed that is not in the English language. The German Patent, DE 299 08 045 U 1 is entirely in German, and no explanation of relevance is included in the information disclosure statement. It has been placed in the application file, but the information referred to therein has not been considered.

***Drawings***

2. The drawings are objected to because they fail to meet several of the requirements of CFR § 1.84. Among the most noticeable of the violations includes:

- § 1.84 (g) *Margins:*

Each sheet must include a top margin of at least 2.5 cm. (1 inch), a left side margin of at least 2.5 cm. (1 inch), a right side margin of at least 1.5 cm. (5/8 inch), and a bottom margin of at least 1.0 cm. (3/8 inch). These margins are not present in Figures 1, 2, 13, and 15.

- § 1.84 (l) *Character of lines, numbers, and letters:*

Every line, number, and letter must be durable, clean, black (except for color drawings), sufficiently dense and dark, and uniformly thick and well-defined. The weight of all lines and letters must be heavy enough to permit adequate reproduction. The reference characters in the figures that appear to be hand drawn instead of produced electronically, such as '1306' and '1307' of Figure 13, fail to meet this requirement.

- § 1.84 (p) (3) *Numbers, letters, and reference characters:*

Numbers, letters, and reference characters must measure at least .32 cm. (1/8 inch) in height. They should not be placed in the drawing so as to interfere with its comprehension. Therefore, they should not cross or mingle with the lines. Some of the labels, such as "Chip and Symbols Clocks" in Figure 1 and others of the similar font closely approach, if not violate, this minimum size requirement. In Figure 2, the word "Samples" is run through by the rectangular box (235) of the CD player. In Figures 16 and 17, the last line of the labels in the respective boxes (1605,1705) in each of the figures is cut off and unreadable. In Figure 2, the number '100' is crossed by the line for the woofer (201).

- § 1.84 (p) (5) *Numbers, letters, and reference characters:*

Reference characters not mentioned in the description shall not appear in the drawings. Reference characters mentioned in the description must appear in the drawings. The following reference characters are not found in the specification: 10, 130, 201, 202,

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211, 212, 221, 222, 224, 230, 231, 309, 403, 600, 601, 602, 603, 604, 900, 901, 902, 903, 1100, 1103, 1104, 1214, 1303, 1304, 1314, 1500, 1501, 1502, 1505, 1506, 1510, 1511, 1512, 1515, 1516, 1520, 1521, 1522, 1525, 1526, 1530, 1532, 1533, 1534, 1535, 1536, 1600, 1601, 1604, 1605, 1609, 1610, 1700, 1701, 1702, 1703, 1704, 1705, 1709, 1710, 1900, and 1902. (The first digit or digits of the numbers above correspond to the Figure that they appear in, except for the reference character '10', which can be found in the upper left quadrant of Figure 2)

The drawings are objected to because on page 12, lines 12-13, the "Reed Solomon Encoder and Interleaver with Frame Marker Insertion 407" is not shown in the drawings. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

**Specification**

3. The disclosure is objected to because of the following informalities:

- Page 1, line 3, please change the phrase "claims the benefit of" to "is a divisional of"
- Page 1, line 19 and Page 2, line 1: The phrase "[Recoton Patent Reference]" is neither explained nor understood.
- Page 14, lines 8-10: The "RF Upconverter 402" is labeled as "403" in the associated Figure 4.
- Page 14, line 12: The "Power Amplifier 401" is labeled as "402" in the associated Figure 4.
- Page 33, line 4: The "RF Receiver 204,214,223" is labeled as "204,214,224" in the associated Figure 2.
- Page 36, lines 10-11: The phrase "These clocks are generated by the Framing and Error Protection Decoder and Clock Generator as shown in." is an incomplete sentence.

The applicant's assistance is requested in correcting any further discrepancies found in the disclosure that are of a similar nature, but are not specifically cited above.

Appropriate correction is required.

### ***Double Patenting***

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

4. **Claims 1-47** are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 5-14, 27-28, and 33 of copending Application No. 09/452904. Although the conflicting claims are not identical, they are not patentably distinct from each other because the current claims are a subcombination of the claims from the previous application. The claims of the current application cite only the receiver and not the combination of the receiver and transmitter as in the audio system of the prior application.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

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***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. **Claims 11-13** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In **Claim 11**, the phrase "positioned within the bitstream with a temporal accuracy of at least one audio data sample" is not understood in regards to the details of the "temporal accuracy". The language of the claim fails to point out how a degree of "accuracy" can be determined in regards to the positioning of the frame markers. The applicant is requested to either amend the content and/or language of the claim in order to clarify the intended meaning of the claim, or identify the location in the specification that explains and supports the use of such content and claim language.

**Claims 12 and 13** are rejected on the same basis for similar claim language.

In **Claim 12**, the phrase "positioned within the bitstream with a temporal accuracy at least on the order of an audio data bit from said bit-stream" leaves the claim vague and indefinite.



In **Claim 13**, the phrase "positioned within the bitstream with a temporal accuracy at least on the order of one clock period of the RF transmission clock" leaves the claim vague and indefinite.

In the remainder of this office action, the above claims are handled in regards to the Office's best possible interpretation of the claims' intended meanings, though clarification by the applicant is still required.

Appropriate corrections are required.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore,

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the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

6. **Claims 1-5, 7-8, 10, 14-18, 20, 24-28, 30, 32, 34, 38-42, and 44** are rejected under 35 U.S.C. 102(e) as being anticipated by Schotz et al (USPN 5832024). Hereafter, Schotz et al will be simply referred to as "Schotz".

Regarding **Claim 1**, Schotz discloses a digital wireless speaker system (20) with a transmitter (22) and a receiver (24) (col. 6, lines 6-11). The receiver reads on "A discrete speaker for use in a distributed digital wireless loudspeaker system". In the system of Schotz, the receiver (24) receives the broadcast signal (36), demodulates it, and emits it through a coupling means that are intended to be connected to speakers or other audio transducing equipment (col. 6, lines 44-54). The receiver includes a data clock recovery circuit (194) for obtaining the clock signal from the transmission signal received through the RF antenna (40) and RF amplifier (156), which reads on "means for receiving an RF signal including a transmission clock" (col. 11, lines 13-24 and col. 12, lines 29-40). The digital interface transmitter (62) of the system introduces a synchronization signal into the transmission data for enabling the receiver to distinguish between the left and right audio data (col. 8, lines 21-26). The inclusion of a left and right channel signal in the audio data received by the receiver reads on "at least

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two channels of transmission data". The received signal is eventually sent to output means (46), which connects the output signal to speakers or another suitable transducer equipment (col. 6, lines 51-54). This reads on "broadcasting sound based upon the received RF signal". The data clock recovery circuit (194) provides an recovered clock signal on several output lines (196A-196C), which reads on "means for generating a derived sample clock based on a transmission clock" (col. 12, lines 33-40). The synchronization signal, encoded by the digital interface transmitter (62) of the transmitter (22) that enables the receiver (24) and the receiver's digital interface receiver (214) to distinguish between the two reads on "means for selecting on of the channels from the RF transmission data for the speaker to broadcast" (col. 13, lines 30-51). The digital interface receiver (214) sends the processed and decoded transmission signal (36) to a digital-to-analog converter (216) that converts the output signal to a form appropriate to output transducers (col. 13, lines 52-67). This reads on "generating output audio data based upon the selected channel". From the D-to-A converter (216), this data is then eventually received by an output means (46), which connects the output signal to speakers or another suitable transducer equipment (col. 6, lines 51-54). This reads on "means for broadcasting sound based upon the output audio data".

Regarding **Claim 2**, the digital interface transmitter (62) includes the capability to incorporate additional subcode information about various volume and tone controls in the transmission stream

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(col. 8, lines 8-14). This reads on "the RF signal includes status data".

Regarding **Claim 3**, the subcode information that the digital interface transmitter (62) has the ability to add to the transmission signal includes volume, tone, and other auxiliary control information (col. 8, lines 9-12). Between the volume controls and the most common types of auxiliary control information that a system such as this would involve, this inherently reads on "the status data includes a control signal for activating the wireless speaker".

Regarding **Claim 4**, the subcode information that the digital interface transmitter (62) has the ability to add to the transmission signal includes volume, tone, and other auxiliary control information (col. 8, lines 9-12). This reads on "the status data includes a control signal for controlling volume of the broadcast sound".

Regarding **Claim 5**, the subcode information that the digital interface transmitter (62) has the ability to add to the transmission signal includes volume, tone, and other auxiliary control information (col. 8, lines 9-12). The tone controls read on "status data includes a control signal for controlling equalization of the broadcast sound".

Regarding **Claim 7**, the digital interface transmitter (62) combines the control subcodes, a synchronization signal, and the left and right audio data into the single, serial output bit stream (col. 8, lines 5-26). This reads on "the RF signal includes a channel of status data".

Regarding **Claim 8**, the transmitter includes a digital interface transmitter that initially combines the left and right audio data with the synchronization signal and any control subcodes (col. 8, lines 8-26). The receiver includes a digital interface receiver (214) that demultiplexes the received transmission signal (col. 13, lines 31-33). These two components read on "the two channels of audio transmission data and the status channel are multiplexed prior to transmission" and "means for demultiplexing the received RF signal".

Regarding **Claim 10**, the serial output data from the digital interface transmitter is biphase-mark encoded (col. 8, lines 19-21). The encoding of the digital inter face transmitter specifically includes a synchronization signal (col. 8, lines 21-26). As is well known in the art, biphase-mark encoding schemes involving data transmission include a particular sequence of data that signify the beginning or end of a frame of transmitted data. Thus, this type of marking reads on "the RF signal includes frame markers" and "means for synchronizing the speaker based upon the frame markers".

Regarding **Claim 14**, please refer to the like teachings of Claim 1.

Regarding **Claim 15**, please refer to the like teachings of Claim 2.

Regarding **Claim 16**, please refer to the like teachings of Claim 3.

Regarding **Claim 17**, please refer to the like teachings of Claim 4.

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Regarding **Claim 18**, please refer to the like teachings of Claim  
5.

Regarding **Claim 20**, please refer to the like teachings of Claim  
10.

Regarding **Claim 24**, please refer to the like teachings of Claims  
1 and 10.

Regarding **Claim 25**, please refer to the like teachings of Claim  
2.

Regarding **Claim 26**, please refer to the like teachings of Claim  
3.

Regarding **Claim 27**, please refer to the like teachings of Claim  
4.

Regarding **Claim 28**, please refer to the like teachings of Claim  
5.

Regarding **Claim 30**, please refer to the like teachings of Claims  
7 and 8.

Regarding **Claim 32**, please refer to the like teachings of Claims  
1 and 2.

Regarding **Claim 34**, please refer to the like teachings of Claim  
10.

Regarding **Claim 38**, please refer to the like teachings of Claims  
1 and 8.

Regarding **Claim 39**, please refer to the like teachings of Claim  
2.

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- Regarding **Claim 40**, please refer to the like teachings of Claim
- 3.
- Regarding **Claim 41**, please refer to the like teachings of Claim
- 4.
- Regarding **Claim 42**, please refer to the like teachings of Claim
- 5.
- Regarding **Claim 44**, please refer to the like teachings of Claim
- 10.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. **Claims 6 and 29** are rejected under 35 U.S.C. 103(a) as being unpatentable over Schotz as applied above, and further in view of Allen et al (USPN 6487296). Hereafter, "Allen et al" will be simply referred to as "Allen".

As detailed above, Schotz discloses a wireless digital loudspeaker system that transmits a single, serial data stream between an input signal transmitter and multiple output receivers. The

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transmission of Schotz includes multiple channels of multiplexed into a single data stream (col. 8, lines 5-12).

Schotz does not specify:

- transmitting two RF signals at two different frequencies, where each of the signals is based on a different audio data channel

Allen discloses a wireless surround sound speaker system that includes a variety of options regarding the output and controls of the various speakers of the system. Allen's system includes a transmitter (13) and multiple receivers (14), where a receiver (14) is incorporated at each speaker (30) (col. 5, lines 45-65). The transmitter (13) includes multiple transmitters (65,66,80,81) for emitting various channels of the audio input signal at pre-selected frequencies (51) (col. 7, lines 2-39, Figure 5). This reads on "means for transmitting transmits two RF signals at two different frequencies, each RF signal based upon one of the transmission data channels".

To one of ordinary skill in the art at the time the invention was made, it would have been obvious to include the multiple transmitters transmission scheme of Allen as the transmission means in the system of Schotz. The motivation behind such a modification would have been that the transmission data would not have needed to be multiplexed into a single data stream as taught by the system of Schotz. Multiple transmission streams would have also meant that a transmission error



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on a transmission line would have affected just one channel of audio data instead of all of the audio channels being reproduced.

Regarding **Claim 29**, please refer to the like teachings of Claim 6.

8. **Claims 9, 19, 31, 33, and 43** are rejected under 35 U.S.C. 103(a) as being unpatentable over Schotz as applied above, and further in view of Anderson et al (USPN 5406634). Hereafter, "Anderson et al" will simply be referred to as "Anderson".

As detailed above, Schotz discloses a wireless digital loudspeaker system that transmits a single, serial data stream between an input signal transmitter and multiple output receivers. This information included in this transmitted data stream includes control data for adjusting the output operations of the receiving speakers of the system (col. 8, lines 5-26).

Yet, Schotz does not specify:

- that the system includes means for assigning the speaker to a speaker group
- corresponding means for selectively activating the speaker based on this speaker group

Anderson discloses an intelligent speaker unit that provides both a speaker as well as the transmission unit of the system with a wider range and variety of controls. The control message system of Anderson includes the ability to address multiple speaker units with a single reference signal (col. 4, lines 16-19). The control message system

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also includes the ability to assign multiple speakers with the same sound delay value, based on the location of the speakers (col. 6, lines 21-29). In both situations, these associations and variables are used to determine the output of the speakers. This reads on "means for assigning the speaker to a speaker group and means for selectively activating the speaker based on the speaker group assigned to it".

To one of ordinary skill in the art at the time the invention was made, it would have been obvious to add the extended control capabilities of Anderson to the system of Schotz. Such a control message system would have increased the extent of control the transmitter system would have had on the receivers, which would have enhanced the degree of complexity and selectivity available for reproducing an input signal.

Regarding **Claim 19**, please refer to the like teachings of Claim 9.

Regarding **Claim 31**, please refer to the like teachings of Claim 9.

Regarding **Claim 33**, please refer to the like teachings of Claim 9.

Regarding **Claim 43**, please refer to the like teachings of Claim 9.

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9. **Claims 11-13, 21-23, 35-37, and 45-47** are rejected under 35 U.S.C. 103(a) as being unpatentable over Schotz as applied above, and further in view of Wang (USPN 5751774).

As detailed above, Schotz discloses a wireless digital loudspeaker system that transmits a single, serial data stream between an input signal transmitter and multiple output receivers. Regarding **Claim 11**, the transmission system (22) of Schotz includes two input ports (30C,30D) for receiving digital input signals, the information received through which reads on "digital audio samples in the form of a digital audio bitstream" (col. 7, lines 22-35). Schotz also details that the data stream transmitted to the receiver (24) is multiplexed into a single stream and biphase-mark encoded, a process that as a standard involves frames and frame markers, but gives no further details about the process of multiplexing the data.

Schotz does not specify:

- that the frame markers of the encoding are positioned within the bitstream with a temporal accuracy of at least one audio data sample

Wang discloses a transmission system for digital audio broadcasting. The system of Wang involves formatting a digital audio broadcast signal into a sequence of frames, with each frame including a header portion and an encoded data portion (col. 3, lines 28-32). Each of the header portions includes 100 complex symbols which represent channel sync, sounding, equalization, timing phase recovery, and interleaver, or symbol clock, synchronization information (col. 4,

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lines 1-31). This heading indicates the beginning of each frame of data (Figure 4). As a header is present in the composite data transmission sequence before each group of audio data, this reads on "the frame markers are positioned within the bitstream with a temporal accuracy of at least one audio data sample".

To one of ordinary skill in the art at the time the invention was made, it would have been obvious to use the multiplexing approach of Wang in the transmission system of Schotz. In view of the system of Schotz, the adapting the system of Wang for proper use would have involved operating the main digital signal processor (DSP) of Wang at the transmitter rate of the audio sample clock instead of a fixed, predetermined rate. The motivation behind such a modification would have been that the heading portion of the frame structure of Wang would have provided a detailed amount of synchronization and correction data for the transmitter/receiver communication system of Schotz. Operating the DSP of Wang at the audio sample clock rate would have been desired because it would have enabled the transmitter system of Schotz to convey the proper audio sampling rate to the receivers, along with the beginnings and endings of each sample of data.

Regarding **Claim 12**, the header portion of the frames of Wang consists of 100 symbols, each of which is two bits in size (col. 3, lines 28-36). These bits are subsequently followed by the bits that form the audio data part of the frame (col. 3, lines 28-36 and col. 4, lines 21-24 and Figure 4). Again, the header portions are multiplexed

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into an encoded signal and are used to indicate the beginning of frame as well as interleaver block (col. 3, lines 17-20 and col. 4, lines 21-24). This reads on "the frame markers are positioned within the bitstream with a temporal accuracy at least on the order of an audio data bit from said bit-stream".

Regarding **Claim 13**, the transmission clock (66) is provided as an input to the digital interface transmitter (62) in the system of Schotz ((col. 8, lines 62-67 and Figure 2A)). This clock (66) runs at an upsampled speed based on the sampling frequency of the audio source (col. 8, lines 51-54). The digital interface transmitter (62) is the component in the system of Schotz that multiplexes the control and audio input lines, which, in view of the system of Wang, would have also been the component that inserts the header components into the signal (col. 8, lines 5-8 of Schotz and col. 3, lines 16-36 of Wang). Thus, in view of the modifications detailed above, the system of Schotz in view of Wang would have multiplexed the control and input audio data and inserted the header components based on the speed transmission clock (66). This reads on "the frame markers are positioned within the bit-stream with a temporal accuracy at least on the order of one clock period of the RF transmission clock".

Regarding **Claim 21**, please refer to the like teachings of Claim 11.

Regarding **Claim 22**, please refer to the like teachings of Claim 12.

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Regarding **Claim 23**, please refer to the like teachings of Claim  
13.

Regarding **Claim 35**, please refer to the like teachings of Claim  
11.

Regarding **Claim 36**, please refer to the like teachings of Claim  
12.

Regarding **Claim 37**, please refer to the like teachings of Claim  
13.

Regarding **Claim 45**, please refer to the like teachings of Claim  
11.

Regarding **Claim 46**, please refer to the like teachings of Claim  
12.

Regarding **Claim 47**, please refer to the like teachings of Claim  
13.

### **Conclusion**

The prior art made of record and not relied upon is considered  
pertinent to applicant's disclosure.

Schotz (USPN 4829570) discloses a wireless remote speaker system  
that emits different channels of audio data over different carrier  
frequencies.

Schotz (USPN 5491839) discloses a transmitter/receiver system  
with multiple source and channel selection controls incorporated into  
both the transmitter and receiver units.

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Zugert et al (USPN 6466832) discloses a wireless transmission system that reframes the input audio data.

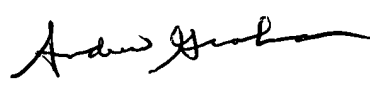
Munich et al (USPN 5420640) discloses a receiver system that receives framed digital input data and includes the corresponding frame synchronization and deinterleaving circuitry for properly reconstructing the input data.


Binder et al (USPN 5625418) discloses a method and arrangement for inserting frame markers into a data transmission stream.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew Graham whose telephone number is (703) 308-6729. The examiner can normally be reached on Monday-Friday (7:30-4:30), excluding alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kimberly Williams, can be reached at (703) 305-4863. The fax number for the organization where this application or proceeding is assigned is 703-872-9314 for regular communications, and 703-872-9315 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

  
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